

Application Serial No. 10/087,866 Reply to Office Action mailed August 25, 2005

LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the present application:

Claims 1-57 (Canceled).

58. (Previously presented) An apparatus for monitoring an oxygen partial pressure in an air mask adapted to deliver oxygen from an oxygen system to an operator, the air mask having an interior surface, the apparatus comprising:

a sensor positioned within the air mask, mounted on the interior surface of the air mask, and capable of providing an output signal corresponding to the oxygen partial pressure within the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

a power source connected to the sensor and the comparator; and

a vibrating motor having a rotatable, eccentric mass, mounted within the air mask, connected to the comparator, and attached to the interior surface of the air mask, the vibrating motor comprising means for vibrating the air mask if the output signal is determined to be lower than the reference signal, for generating a tactile warning on the face of the operator to alert the operator of a potentially hypoxic condition,

wherein the apparatus is independent of the oxygen system and the apparatus does not regulate

the oxygen from the oxygen system, and

wherein the apparatus operates in a cockpit of an aircraft.

59. (Currently amended) The apparatus of claim 58, wherein the air mask is associated with a radio audio system of the aircraft having a VOX capability and a microphone positioned within the air mask, wherein:

the vibrating motor comprises means having sufficient mechanical vibration to break the VOX capability through the microphone and produce a warning tone through the radio audio system.

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60. (Currently amended) The apparatus of claim 58, wherein the comparator and power source are mounted within the air mask.

61. (Canceled).

62. (Currently amended) ~~The apparatus of Claim 61,~~ An apparatus for monitoring an oxygen partial pressure in an air mask adapted to deliver oxygen from an oxygen system to an operator, the air mask having an interior surface, the apparatus comprising:

a sensor positioned within the air mask and capable of providing an output signal corresponding to the oxygen partial pressure within the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

a power source connected to the sensor and the comparator; and

wherein the tactile warning means, connected to the comparator, is mounted within the air mask and connected to the interior surface of the air mask, for vibrating the air mask, if the output signal is determined to be lower than the reference signal, with sufficient force to generate a tactile warning on the face of the operator to alert the operator of a potentially hypoxic condition.

wherein the apparatus is independent of the oxygen system and the apparatus does not regulate the oxygen from the oxygen system, and
wherein the apparatus operates in a cockpit of an aircraft.

63. (Currently amended) The apparatus of claim 62, wherein the comparator and power source are mounted within the air mask.

64. (Cancelled).

65. (Canceled).

66. (Canceled).

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67. (Currently amended) ~~The method of Claim 66, further comprising~~ A method of monitoring an oxygen partial pressure in an air mask adapted to be worn by an operator in an airplane cockpit, wherein oxygen is supplied to the air mask from an oxygen system, comprising:

generating a signal corresponding to the oxygen partial pressure in the air mask, the signal generated independently of the oxygen system, and wherein the signal is not used to regulate the oxygen system;

comparing the generated signal with a reference signal corresponding to a desired oxygen partial pressure;

providing a vibrator having a rotatable eccentric element, the vibrator being connected within the air mask, wherein the step of creating a tactile warning on the face of the operator comprises; and

vibrating the air mask by activating the vibrator in contact with the mask to alert the operator of a potentially hypoxic condition if the generated signal is determined to be lower than the reference signal.

68. (Currently amended) ~~The apparatus of Claim 64, wherein the~~ An apparatus for monitoring an oxygen partial pressure in an oxygen mask of an aircraft, comprising:

a sensor positioned within the air mask and capable of providing an output signal corresponding to the oxygen partial pressure in the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

an amplifier connected to the sensor and the comparator and configured to amplify the output signal;

a power source connected to the sensor and the comparator; and

a vibrating motor connected to the comparator and is attached to the interior surface of the air mask, the vibrating motor configured to vibrate if the generated signal is determined to be lower than the reference signal, the vibrating motor comprising means for vibrating the air mask to generate a tactile warning on the face of an operator sufficient to alert the operator when in a hypoxic condition,

wherein the apparatus is independent of the oxygen system and the apparatus does not regulate the oxygen from the oxygen system, and

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wherein the apparatus operates in a cockpit of the aircraft.

69. (Currently amended) ~~The apparatus of Claim 65, wherein the~~ An apparatus for monitoring oxygen partial pressure in an air mask adapted to supply oxygen to a user aboard an aircraft, comprising:

a sensor positioned within the air mask and capable of providing an output signal corresponding to the oxygen partial pressure directly within the air mask;

a comparator connected to the sensor and configured to compare the output signal with a reference signal corresponding to a desired oxygen partial pressure;

a power source connected to the sensor and the comparator; and

a vibrator, connected to the comparator and is positioned within the air mask, configured to vibrate if the generated signal is determined to be lower than the reference signal, the vibrator comprising means for providing a tactile warning on the face of an operator sufficient to alert the operator when in a hypoxic condition,

wherein the apparatus is independent of the oxygen system,

wherein the apparatus does not regulate the oxygen from the oxygen system, and

wherein the apparatus operates in a cockpit of the aircraft.